

Work Order ID 86757-2

July-06-12 2:17:56 PM

86757

Can see me when your done

Page 1

Item ID: D3405-043

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Lug Assembly

Start Date: 7/06/12

Start Qty: 36.00

36

Cust Item ID:

Required Date: 8/10/12

Req'd Qty: 36.00

36

Customer:

Reference:

Approvals:

Process Plan:

Date: 12-07-10

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3405	Rev B

100

100

Waterjet

FLOW CNC Waterjet

304.125

FLOW WATER JET

Memo

1-Cut as per Dwg D3405

Dwg Rev: B

Prog Rev: B

2-Deburr if necessary

0.00

0.00

36

0

Jan 12-7-12

110

110

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

36

0

Jan 12-7-12

120

120

QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00

0.00

DAS
16
2/6/12

count
36

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86757

86757

Page 2

July-06-12 2:17:56 PM

Item ID: D3405-043 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Lug Assembly
 Start Date: 7/06/12 Start Qty: 36.00 ***36*** Cust Item ID:
 Required Date: 8/10/12 Req'd Qty: 36.00 ***36*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Brake NC Brake NC	NC BRAKE Memo 1-Deburr 2-Form using DT8204 as per Dwg D3405 3- use DT9681 to check if correct forming	0.00 0.00				16			SB 12/08/12
140 *140* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				(x16)			DAS 16 12/05/12
150 *150* Large Fab Large Fab	Weld per dwg A/R S.S. rod Batch: M120013 Large Fab Memo Weld as per Dwg D3405 use DT8484 Identify as D3405-043	0.00 0.00				16			12-08-21/BL

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 86757

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Page 3

July-06-12 2:17:56 PM

Item ID: D3405-043 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Lug Assembly
 Start Date: 7/06/12 Start Qty: 36.00 *36* Cust Item ID:
 Required Date: 8/10/12 Req'd Qty: 36.00 *36* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160	QC9- Inspect visual per QSI004- Fusion Welds	0.00				16	12.8.22		DAS 24 8-83
160									
QC	Memo	0.00							
Quality Control									

170	QC5- Inspect part completeness to step on W/O	0.00							
170									
QC	Memo	0.00							
Quality Control									

180	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
180									
Powdercoat	Memo	0.00							
Powder Coating									

START TIME: 3:15
 OVEN TEMPERATURE: 320
 FINISH TIME: 3:45

M121841

6

6X4

M-T
 12/08/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

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Page 4

July-06-12 2:17:56 PM

Item ID: D3405-043 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Lug Assembly
 Start Date: 7/06/12 Start Qty: 36.00 ***36*** Cust Item ID:
 Required Date: 8/10/12 Req'd Qty: 36.00 ***36*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 *190* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				6	0	12/8/22	
200 *200* Packaging Packaging	Identify as per dwg & Stock Location: <u>468</u> Memo	0.00 0.00		50		6	2	12/8/23	
210 *210* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00						MLJ 12/08/23 UMB 12-08-23	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

July-06-12 2:17:56 PM

Page 1

Work Order ID: 86757

Parent Item: D3405-043

Parent Item Name: Lug Assembly

Start Date: 7/06/12

Required Date: 8/10/12

Start Qty: 36.00

Required Qty: 36.00

Comments: IPP A05.09.01New issueKJ/JLM
IPP B 09.01.28 Rev b dwg EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3404-1 GHW Lug		Manufactured	No			100	Each	126.0000	1	36			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				WA 85451		126				16			
				83879		26							
				85100		160							
M304S11GA 304/316 0.125 Sheet		Purchased	No			150	sf	45.0260	0.154	5.8357908 5.9 S.F			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				MAT020		45.026							
				121380		23.9							
				121780		21.126				12.780			

7/12-08-21
JBL

Jim 12-7-12

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

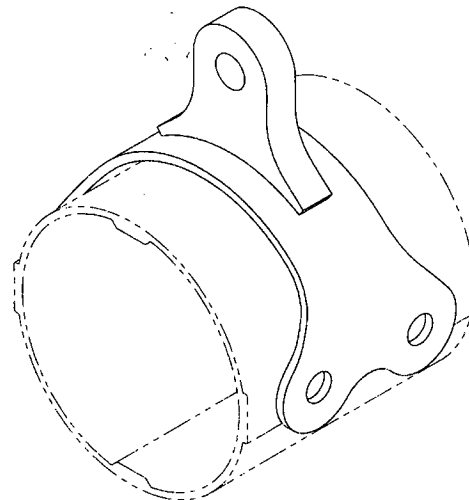
QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		

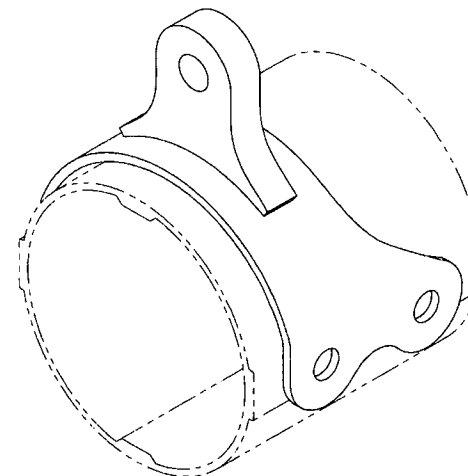
ITEM No.	QTY. -041	QTY. -043	PART NUMBER	DESCRIPTION
1	X		D3405-041	LUG ASSEMBLY
2		X	D3405-043	LUG ASSEMBLY
11	1	1	D3404-1	GHW LUG
12	1		D3405-1	GHW BRACKET
13		1	D3405-3	GHW BRACKET

△B

86757
R120710



D3405-041 LUG ASSEMBLY
(SKID TUBE SECTION SHOWN
FOR REF ONLY)



D3405-043 LUG ASSEMBLY
(SKID TUBE SECTION SHOWN
FOR REF ONLY)

RELEASED
08/12/18

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT ASSEMBLY WHITE (4.3.5.2) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3405-041" USING FINE POINT PERMANENT INK MARKER
: IDENTIFY WITH DART P/N "D3405-043" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: -041, 0.85 lbs
-043, 0.87 lbs

B	DRAWING REDRAWN IN SOLIDWORKS WITH CURRENT STANDARDS AND TRANSFERRED TO "B" SIZE BORDER. FLAT PATTERNS FOR -1 & -3 INCREASED IN LENGTH TO PREVENT FOULING AT INSTL (SEE PAR198). SHEETS 3 & 4 ZONE AB 4.120 DIM WAS 4.100.		AJS	08.09.19
A	NEW ISSUE		PH	05.03.08
REV.	DESCRIPTION		BY	DATE
DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN	AJS			
CHECKED		DRAWING NO.	REV. B	
MFG. APPR.		D3405	SHEET 1 OF 4	
APPROVED		TITLE	SCALE	
DE APPR.		GHW LUG ASSEMBLY	NTS	
DATE	08.09.19		COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

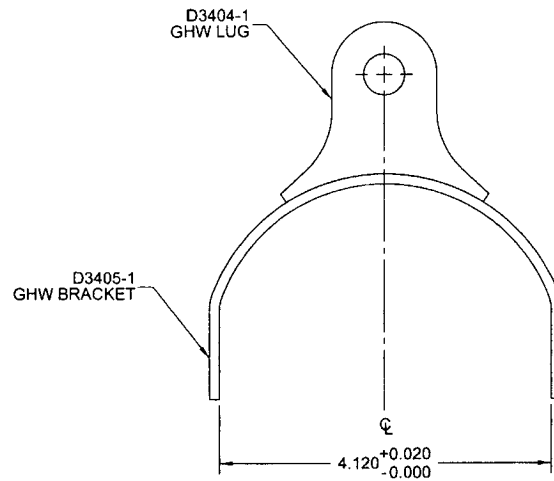
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

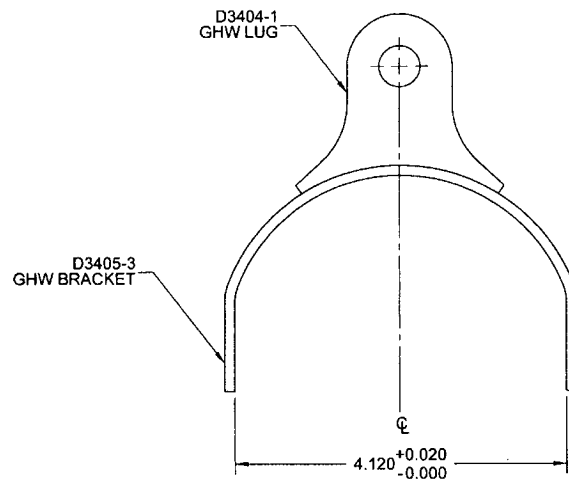
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

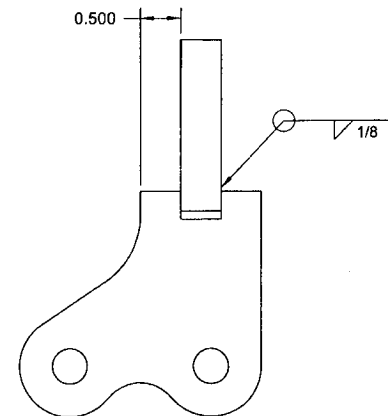
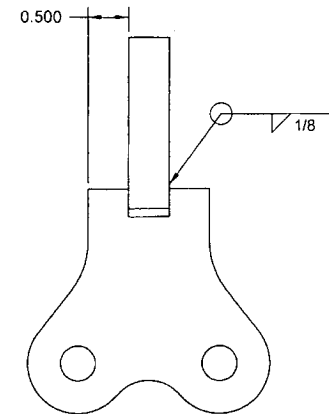
NOTE: Date & initial all entries



D3405-041 LUG ASSEMBLY



D3405-043 LUG ASSEMBLY



RELEASED
06/12/18 MTP

DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3405	SHEET 2 OF 4
APPROVED		TITLE	SCALE
DE APPR.		GHW LUG ASSEMBLY	NTS
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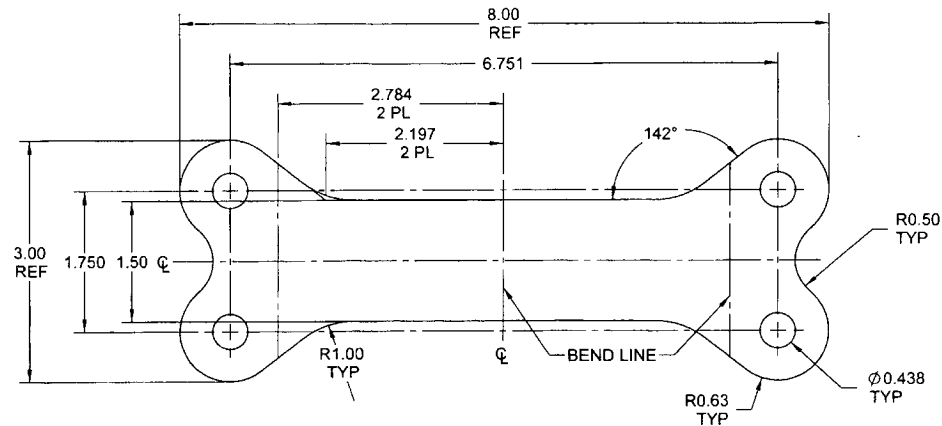
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

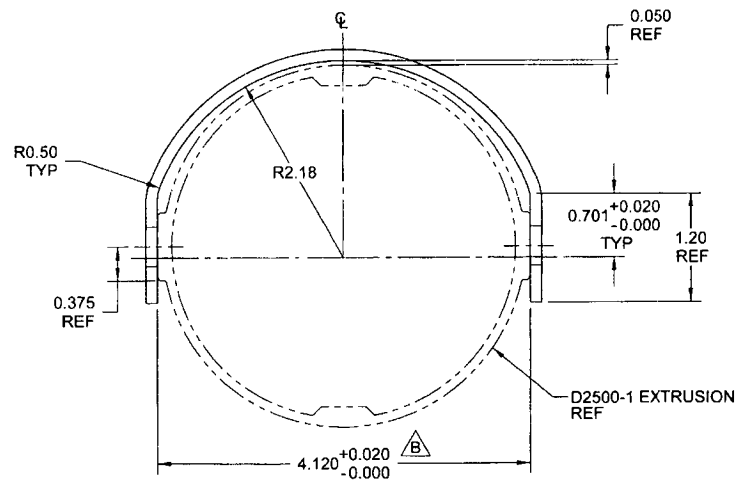
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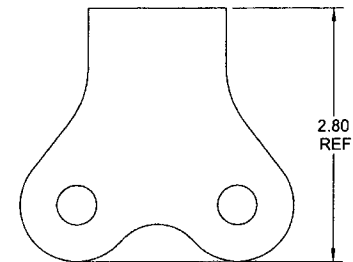
NOTE: Date & initial all entries



D3405-1F GHW BRACKET FLAT PATTERN



D3405-1 GHW BRACKET
(MAKE FROM D3405-1F)







SIDE VIEW FOR REF ONLY

86757

RELEASED
07/08/12

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 11 GAUGE (0.125 THICK)
PER MIL-S-5059 (ANNEALED) 2B FINISH OR AMS 5513/5524
REF. DART SPEC. M304S11GA
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

DESIGN	PH	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3405	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		GHW LUG ASSEMBLY	NTS
DATE	08.09.19	COPYRIGHT © 2005 BY DART AEROSPACE LTD	
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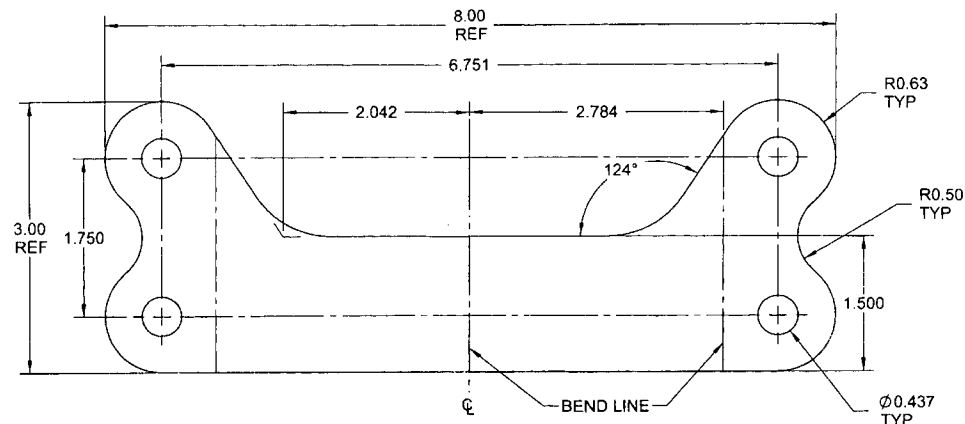
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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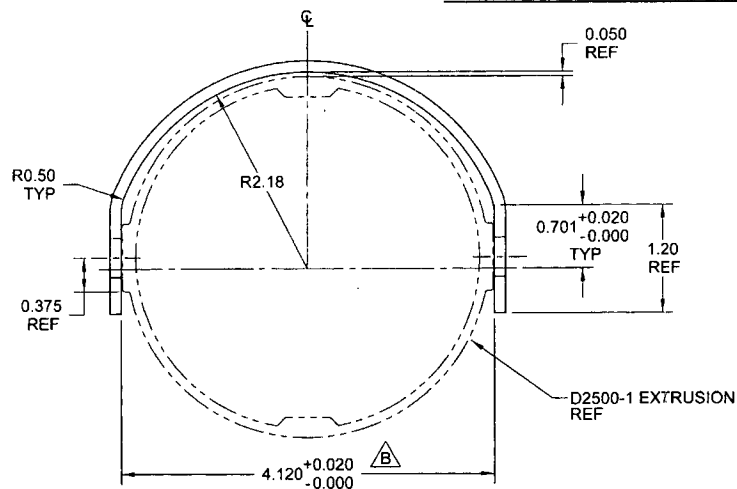
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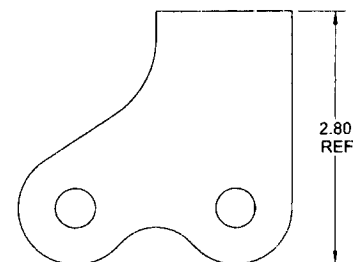
NOTE: Date & initial all entries



D3405-3F GHW BRACKET FLAT PATTERN



D3405-3 GHW BRACKET
(MAKE FROM D3405-3F)



SIDE VIEW FOR REF ONLY

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 11 GAUGE (0.125 THICK)
PER MIL-S-5059 (ANNEALED) 2B FINISH OR AMS 5513/5524
REF. DART SPEC. M304S11GA
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

DESIGN	PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3405	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		GHW LUG ASSEMBLY	NTS
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RELEASED
08/12/18

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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